

3-2 The student will demonstrate an understanding of the structures, characteristics, and adaptations of organisms that allow them to function and survive within their habitats. (Life Science)

Key Concepts:

Life cycle – plant: seed plant, germination, seedling, flower, fruit

Life cycle – animal: larva, pupa, complete and incomplete metamorphosis

Habitat

Physical & behavioral adaptations -

Animals: hibernation, migration, defense, locomotion, movement, food obtainment, camouflage

Plants: seed dispersal, tropism

Food chain: producer, consumer, decomposer

Supporting Content Web Sites

Birmingham.Grid for learning, Birmingham, U.K.

http://www2.bgfl.org/bgfl2/custom/resources_ftp/client_ftp/ks2/science/plants_pt2/index.htm

Colorful website on the life cycle of plants. Teachers can choose from seed growth; parts of a flower; seed dispersal; plant identification or parts of the plant. 3-2.1

BBC.co.uk

<http://www.bbc.co.uk/nature/animals/mammals/habitat.shtml>

Interactive game for students allowing them to see how food impacts energy levels as the fox avoids predators. 3-2.1

Utah education network

http://www.uen.org/utahlink/activities/view_activity.cgi?activity_id=3803

Click on different pictures of animals and explore their defense mechanisms used for survival 3-2.2

New Hampshire Public Television

<http://www.nhptv.org/Natureworks/nwep1.htm>

Interactive website allows students to check what they know about adaptations. Students are able to click on specific animals. 3-2.2

New Hampshire Public Television

<http://www.nhptv.org/Natureworks/nwep2.htm>

Interactive website allows students to check what they know about color adaptations. Students are able to click on specific animals to see how coloration helps them survive. 3-2.2

New Hampshire Public Broadcasting

<http://www.nhptv.org/Natureworks/nwep4.htm>

Interactive website allows students to check what they know about migration including how and why animals migrate. Students can click on a Canadian goose and monarch butterfly to see how and why they migrate as well. 3-2.3

Offwell Woodland & Wildlife Trust

http://www.countrysideinfo.co.uk/seed_dispersal/index.htm

Website contains colorful pictures, links to vocabulary and a good explanation for the teacher concerning seed dispersal by wind, water or animals. 3-2.2

New Hampshire Public Broadcasting

<http://www.nhptv.org/Natureworks/nwep5.htm>

Contains an interactive quiz; nature files; and information on habitats; 3-2.2

BB.co.UK

<http://www.bbc.co.uk/schools/revisewise/science/living/>

Colorful and Interactive food chain complete with quiz to check knowledge. 3-2.5

Habitats

<http://library.thinkquest.org/J0113187/tankshabitats.html> This site has some pictures of items students identify as living or nonliving. It also has information about characteristics of living things.

University of Michigan: Habitats

<http://animaldiversity.ummz.umich.edu/site/index.html> This site has various pictures, sounds and habitats that the teacher can use to help students determine the difference among various organisms such as birds, reptiles, mammals and amphibians.

Suggested Literature

Jenkins, Steve and Robin Page. *I See a Kookaburra!*. Illustrated by Steve Jenkins. Houghton Mifflin Company. 32pp.

ISBN 0-618-50764-7.

The reader travels through animal habitats in six different regions of the world and the adaptations required to survive. 3-2.3

Jenkins, Steve and Robin Page. *What Do you Do With a Tail Like This?*. Illustrated by Steve Jenkins. Houghton Mifflin Company. 32pp.

ISBN 0-618-50764-7

For a young reader to attach animal parts to specific animals. 3-2.1

Stockland, Patricia M.. *Red Eyes or Blue Feathers: A Book About Animal Colors..*

Illustrated by Todd Ouren. Picture Window Books. 24pp. ISBN 1-4048-0931-7, Students learn how an animals structure allows it to survive in its environment. Many habitats and animals are described. 3-2.1

Brenner, Barbara. *One Small Place in a Tree*. Illustrated by Tom Leonard. HarperCollins Publishers. 32pp. ISBN 0-688-17180-X, ISBN 0-688-17181-8. (A) By looking at a microhabitat in a single tree, the reader will discover the relationships between the tree and the various organisms, from bears to beetles to birds, that make the tree their home. 3-2.3

Heligman, Deborah. *Honeybees*. Illustrated by Carla Golembe. National Geographic Society. 32pp.

ISBN 0-7922-6678-1.

Characteristics, life cycle, physical characteristics and adaptations of the honeybee for early elementary grade three students. 3-2.1

Lauber, Patricia. *Who Eats What? Food Chains and Food Webs* (Let's-Read-and-Find-Out Science, Stage 2) (Paperback) ; Illustrated by Holly Keller, 32 pp. Harper Collins Publisher, Trade ISBN 0064451305 3-2.5 Students follow several animals through the food chain to the plant producers.

Kalman, Bobbie. *How do Animals Adapt?* (The Science of Living Things), Crabtree Publishing Co. 32pp.

ISBN 0865059578 3-2-2

Descriptions of how animals adapt to survive in different environments.

Moncure, Jane Belk. *How Seeds Travel: Poppuns and Parachutes* (Discovery World : First Steps to Science), Childs World Publishing, 32 pp.

ISBN 0895655691

Several different species of plants travel from one area to another. 3-2.2

Pascoe, Elaine. *Seeds Travel: How and Why*, Illustrated by Dwight Kuhn, Gareth Sevens Publishing, 24pp.

ISBN: 0836830121

Briefly describes some of the different ways various kinds of seeds are carried from place to place to find good places to grow 3-2.2

Reif, Pat. *The Magic School bus Hops Home*, Illustrated by Nancy Stevenson, Scholastic Paperback Publishing, 32pp;

ISBN 0590484133

Students shrink to the size of a frog to study animal habitats. 3-2.3

Goodman, Susan E. *Claws, Coats and Camouflage: The Ways Animals Fit into Their World*. Illustrator Michael J. Doolittle. Millbrook Press. 48pp.

ISBN 0-7613-1865-8

Descriptions on how different animals from insects to humans are adapted for surviving in their environments. 3-2.2

Knopf, Alfred A. *Ten Seeds*. Written and illustrated by Ruth Brown. Random House Children's Books. 22pp.

ISBN 0-375-80697-0

Plant life cycles and predator/prey relationships are depicted in a clever counting book. Ten sunflower seeds are planted, and all but one are destroyed. However, the one seed grows and flowers, completing the cycle. This is an excellent depiction of interaction in nature and the need for multiple seeds to be planted. 3-2.1

Recommended Streaming Video

Food Chain Mystery (segments 1-6) 3-2.5

1:05 min. Plants, Students begin with the plant as producer and how it receives food. Then moves to animals for 40 seconds, which then divides, into producers; consumers (1:18), and decomposers (0:56).

Animal Adaptations Students learn about the adaptations animals have make in order to live and prosper. Covers both the physical and behavioral adaptations of animals in regard to getting food, water, oxygen, protection from predators, shelter, and reproduction. Students will learn just how important adaptation is in the survival of all animal species (24:00)

How Plants Grow Students will investigate and understand that in order for seeds to germinate and grow they must receive certain basic needs—food, air, water, light, and a place to grow. Next, they are introduced to the parts of a plant and learn how plants produce their own food. They also see how plants and animals depend upon each other for growth (19:00)

Animal Lifecycles Students will learn that living things grow and change. They learn to compare animal parents and babies. They see that some animal babies do not look like their parents. From tadpole to frog, egg to chicken, caterpillar to butterfly, and puppy to dog; students are introduced to, and learn the stages of, the life cycles of animals.

Career Connections

Oceanographer: An oceanographer studies wildlife found in the ocean habitat.

Ecologist: An ecologist specializes in studying plants and animals in the environment.

Biologist: A biologist studies plants and animals in nature.

Biologist and resource management specialist: A biologist and resource management specialist studies ways to protect endangered animals and studies the environments in which they live and how to help maintain the environments.